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Title: Need to establish a rocket launch centre at Kulasekarapattinam, Tamil Nadu.

SHRI S.S. RAMASUBBU (TIRUNELVELI): As the frequencies of PSLV and GSLV launches are growing, the need to establish an additional spaceport is continuously arising. It is essential to have strategic, security and safety aspects as the main criteria for rocket launching. Many nations have established spaceports in various locations viz. USA(7), Russia (4), China (3) and Japan (2).

The ideal location for establishing an efficient space transportation system is around equator. Launching away from the equator will reduce the launch capability of the rocket i.e. satellite weight has to be compromised. At present, India is having a rocket launch site in Sathish Dhawan Space Centre Sriharikotta (SDSC â€" SHAR) where already two spaceports are available at latitude of 13.72 N and longitude of 80.23E. Our communication, remote sensing and scientific mission satellites are launched from there. The communication satellites are launched eastwards (GSLV) and the remote sensing/scientific mission satellites (PSLV) are launched towards south. Since the present launch site is located 13.72 N of equator and hence -.50 km/hr rotational velocity of earth has to compensated for all eastward launches (GSLV). This additional 50km/hr velocity requirement for yaw manoeuvring such weights consumes huge amount of propellant. This directly minimizes the weight of the communication satellites or size of the human space capsule. This is really a worrisome scenario where India is having limited launch capabilities and shortage of transponders.

In the case of southward launches (PSLV), the geography of SDSC â€" SHAR is not a preferable and economic one. To avoid fly over Sri Lanka and avoid the impact of spent stages outside the exclusive economic zone of that country, the launch vehicles are steered towards southeast and again steered towards south to position the satellite in its intended orbit. These manoeuvrings are done in the initial stages where gravity predominantly consumes more propellant. The loss can be fully avoided by selecting a suitable launch location capable of launching southwards also.

In this scenario, the best alternative location for establishing spaceport is Kulasekarapatinam in Tamil Nadu from where both southward and eastward launches will be perfect and suitable. From here, nearest foreign land is also 200 kms. away and hence range safety is not a major constraint. The weather round the clock is also conducive. The nearest Liquid Propulsion System Centre, Mahendragiri (LPSC(M)) is having sufficient expertise in handling all type of liquid propellants, storage for establishing Test stands and launch pads, etc. Tuticorin airport and port are the major required infrastructural facilities available here.

Keeping in view of above, I humbly urge upon the Union Government to establish country's third rocket launch centre at Kulasekarapattinam, Tamil Nadu at the earliest.